CAMOSUN COLLEGE	**School of Arts & Science** **MATHEMATICS DEPARTMENT** **MATH 112** **Fundamentals of Math 1** **Quarter 1/Fall 2009 (Sep-Dec)**

COURSE OUTLINE

The course description is online @ http://camosun.ca/learn/calendar/current/web/math.html

Ω *Please note: the College electronically stores this outline for five (5) years only.*
   *It is **strongly recommended** you keep a copy of this outline with your academic records.*
   You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

1.   Instructor Information

(a)	Instructor:	Jill Britton		
(b)	Office Hours:	9:30-11:20 daily		
(c)	Location:	E246		
(d)	Phone:	250-370-3471	Alternative Phone:	250-652-6316
(e)	Email:	jbritton@camosun.bc.ca		
(f)	Website:	http://britton.disted.camosun.bc.ca		

2.   Intended Learning Outcomes
(No changes are to be made to these Intended Learning Outcomes as approved by the Education Council of Camosun College.)

Upon completion of this course the student will be able to:

1.   Differentiate between inductive and deductive approaches to problem solving.
2.   Identify and use classic problem solving strategies.
3.   Use truth tables to establish the equivalence of compound propositions and to examine the validity of arguments.
4.   Use Venn diagrams to solve counting and probability problems.
5.   Use the multiplication principle to solve counting and probability problems.
6.   Use permutations and combinations to solve counting and probability problems.
7.   Solve probability problems involving independent events.
8.   Use tree diagrams to solve probability problems involving events that are not independent with a visual extension to Bayes' rule.
9.   Compute and interpret descriptive statistics.
10. Perform calculations involving binomial and normal distributions.
11. Solve binomial distribution questions using an appropriate normal distribution.
12. Research topics suitable to the elementary classroom.

**Attendance is compulsory in the FUN WITH PATTERNS
portion of the course (Objective 12).**

3.   Required Materials

(a) Texts: Finite Mathematics, 9th Edition (S.T. Tan)
(b) Other: Supplementary Material to Accompany Finite Mathematics, 9th Edition (Jill Britton)
(c) Materials fee for **FUN WITH PATTERNS** ($30) – materials include manual
(d) **CASIO** model **fx-300MS** scientific calculator

4.   Course Content and Schedule
(This section can include: class hours, lab hours, out of class requirements and/or dates for quizzes, exams, lectures, labs, seminars, practicums, etc.)

M	Sep 7	**LABOUR DAY (College Closed)**
T	Sept 8	Introduction
W	Sept 9	Inductive Reasoning
H	Sept 10	Inductive Reasoning / Deductive Reasoning
F	Sept 11	Deductive Reasoning

M	Sept 14	Strategies for Problem Solving
T	Sept 15	More Strategies for Problem Solving
W	Sept 16	**SYMBOLIC LOGIC**
		A1 (Propositions and Connectives)
H	Sept 17	A2 (Truth Tables)
F	Sept 18	A2 / A3 (The Conditional and Biconditional Connective)

M	Sept 21	A3
T	Sept 22	A4 (Laws of Logic)
W	Sept 23	A4
H	Sept 24	A5 (Arguments)
F	Sept 25	A5 / Using Valid Argument Forms

M	Sept 28	Using Valid Argument Forms
		SETS AND COUNTING / 6.1 (Sets and Set Operations)
T	Sept 29	6.1
W	Sept 30	6.1 / 6.2 (The Number of Elements in a Finite Set)
H	Oct 1	6.2
F	Oct 2	**TEST 1 [Symbolic Logic, 6.1]**

M	Oct 5	6.2 / 6.3 (The Multiplication Principle)
T	Oct 6	6.3
W	Oct 7	6.3 / 6.4 (Permutations and Combinations)
H	Oct 8	6.4
F	Oct 9	6.4

M	Oct 12	**THANKSGIVING (College Closed)**
T	Oct 13	6.4
W	Oct 14	6.4
H	Oct 15	6.4
F	Oct 16	**FUN WITH PATTERNS**
		Sieve of Eratosthenes / Magic Squares

M	Oct 19	Clock (Mod) Arithmetic
T	Oct 20	Golden Ratio
W	Oct 21	Fibonacci Sequence
H	Oct 22	**TEST 2 [6.2 - 6.4]**
F	Oct 23	**CLASS CANCELLED [NW Math Conference]**

M	Oct 26	Binary Sequence / Pascal's Triangle
T	Oct 27	Patterns in Pascal's Triangle
W	Oct 28	**PROBABILITY**
		7.1 (Experiments, Sample Spaces and Events)
H	Oct 29	7.2 (Definition of Probability)
F	Oct 30	7.3 (Rules of Probability)

M	Nov 2	7.3 / 7.4 (Use of Counting Techniques in Probability)
T	Nov 3	7.4
W	Nov 4	7.4 / 7.5 (Conditional Probability and Independent Events)
H	Nov 5	7.5
F	Nov 6	7.5

M	Nov 9	7.5
T	Nov 10	7.5
W	Nov 11	**REMEMBRANCE DAY (College Closed)**
H	Nov 12	Chapter 7 Cleanup
F	Nov 13	**TEST 3 [7.1 - 7.5 (to Tree Diagrams)]**

M	Nov 16	**PROBABILITY DISTRIBUTIONS AND STATISTICS**
		8.1 (Distributions of Random Variables)
T	Nov 17	8.2 (Expected Value)
W	Nov 18	8.3 (Variance and Standard Deviation)
H	Nov 19	8.3 /Cleanup
F	Nov 20	**TEST 4 [Tree Diagrams, 8.1 - 8.3]**

M   Nov 23   8.4
T   Nov 24   8.4 / 8.5 (The Normal Distribution)
W   Nov 25   8.5
H   Nov 26   8.5 / 8.6 (Applications of the Normal Distribution)
F   Nov 27   8.6

M   Nov 30   8.6
T   Dec 1   **MORE FUN WITH PATTERNS**
             The Conics
W   Dec 2   The Conics / Moire Patterns
H   Dec 3   Line Designs / Curve Stitching
F   Dec 4   **TEST 5 [8.4 - 8.6]**

M   Dec 7   Curves of Constant Width
T   Dec 8   Cycloids
W   Dec 9   Fractals
H   Dec 10   **FINAL EXAMINATION DISCUSSION**
F   Dec 11   Math Videos (*Donald in Mathmagic Land*, *Mathematics Peepshow*)

5.   Basis of Student Assessment (Weighting)
(This section should be directly linked to the Intended Learning Outcomes.)

(a) 5 Class Tests (37.5%)

(b) Final Examination (37.5%)

(c) Portfolio and Attendance (25%)

6.   Grading System
(No changes are to be made to this section unless the Approved Course Description has been forwarded through the Education Council of Camosun College for approval.)

Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at **camosun.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	*Incomplete*: A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	*In progress*: A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. *(For these courses a final grade will be assigned to either the 3rd course attempt or at the point of course completion.)*

CW	*Compulsory Withdrawal:* A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

7.   Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning.
This information is available in the College calendar, at Student Services, or the College web site at
camosun.ca.

STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**.
It is the student's responsibility to become familiar with the content of this policy.
The policy is available in each School Administration Office, at Student Services,
and the College web site in the Policy Section.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED